DOCUMENT RESUME

ED 402 845 HE 029 762

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TITLE Higher Education Institutions as Learning Organizations: The Quality Principles and Practices in Higher Education. ASHE Annual Meeting Paper.
PUB DATE Nov 96
NOTE 17p.; Paper presented at the Annual Meeting of the Association for the Study of Higher Education (21st, Memphis, TN, October 31 - November 3, 1996).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Change Agents; *Change Strategies; Decision Making; Field Interviews; Group Dynamics; Higher Education; *Institutional Environment; Institutional Research; *Management Systems; *Organizational Change; Organizational Climate; Organizational Objectives; Quality Circles; Questionnaires; Resistance to Change; *Systems Approach; *Systems Development
IDENTIFIERS *ASHE Annual Meeting

ABSTRACT

This study examined 10 institutions of higher education with widely different characteristics to determine whether, in the process of implementing quality improvements, they had become "learning organizations." Data were gathered through questionnaires and interviews with more than 20 individuals at nine of the campuses, and were then categorized to create a model of the quality practices in institutions of higher learning. Analysis led to identification of four primary themes in the development of quality principles and practices: (1) the campus forces that drive the changes, (2) the institutional systems developed to implement and support quality improvements (such as developing outcome driven mission statements); (3) factors enhancing or restraining quality improvement efforts on campus (such as leadership and decision-making based on data; (4) outcomes or measures of progress (such as positive change in leadership and improved communication). Twelve lessons emerged from the interviews including: systems thinking is imperative; quality culture leadership is critical; and build partnerships with stakeholders. The study concluded that institutions that have implemented quality principles and practices for at least 3 years have cultures that embrace change, have developed systems that support such initiatives, and use feedback to continually improve their systems and processes. (Contains 15 references.) (CH)

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Higher Education Institutions as Learning Organizations: The Quality Principles and Practices in Higher Education

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HE 029 762

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This paper was presented at the annual meeting of the Association for the Study of Higher Education held in Memphis, Tennessee, October 31 - November 3, 1996. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

Higher Education Institutions as Learning Organizations:

The Quality Principles and Practices in Higher Education

Abstract

Data were collected during visits to ten institutions that had been involved in the implementation of continuous improvement for at least three years. The information was analyzed by unitizing the data, categorizing the units, and then determining the patterns present in the categories. Approximately 25 major categories emerged from this analysis; these were used to create a model of the quality practices in higher education. The five primary components of our model are drivers of the quality improvement efforts, development and implementation of systems that allowed institutions to become learning organizations, enhancers and restraints that promoted and/or restricted the implementation of continuous improvement, and lessons learned on the quality journey that institutions wanted to share to help other institutions learn from their experiences.

Our information indicates that the practices of our case institutions reflect quality concepts. The institutions that are furthest along their quality journeys have developed systems that deal with many of the principles, other institutions are struggling with some of the principles. Regardless of where the institutions are on their quality journeys, members of our institutions recognized that they are working toward improving their institutions, that quality improvement is a continuous process, and that they are members of a learning organization.

Purpose of the Study

The purpose of this study was to determine how the quality principles are working in higher education institutions. Specifically, we wanted to determine if the practices of institutions that are implementing the ideas of quality improvement reflect the quality principles and if the principles have helped them to become learning organizations. In *The Fifth Discipline: The Art & Practice of the Learning Organization,* Senge (1990) explains why learning organizations are so important. "As the world becomes more interconnected and business becomes more complex and dynamic, work must become more 'learningful' ....The ability to learn faster than your competitors may be the only sustainable competitive advantage...The organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and capacity to learn at all levels in an organization" (p. 4).

Learning organizations create structures and systems where "people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (p.3). Learning organizations are able to weave a continuous and

enhanced ability to learn, adapt, and change into their culture. The organizational values, policies, practices, systems, and structures encourage, support, and accelerate learning for all employees (Bennett and O'Brien, 1994). According to Wishart, Elam, and Robey (1996), the ability to continue learning is ensured through the institutionalization of structures and processes designed to promote learning. Structures and mechanisms do not guarantee learning will take place, however; the important criterion is whether the structures and mechanisms support the process of learning. If they do, then any organization has the potential to become a learning organization.

Senge (1990) identifies five disciplines as the basic components of a learning organization: mental models, personal mastery, systems thinking, shared vision, and team learning. In essence, people should shift their old ways of thinking (mental models), learn to be open with others (personal mastery), understand how their company or institution really works (systems thinking), form a plan on which everyone can agree (shared vision), and work together to achieve that vision (team learning). The focus is on organizations and individuals alike becoming continuous learners. But as Marchese (1993) points out, "an organization full of learners doesn't add up to a learning organization" (p. 12).

After reviewing the quality improvement literature in both management and higher education, we found that there are nine principles that are most often mentioned by authorities in quality (Chaffee and Sherr, 1992; Cornesky et. al, 1991; Crosby, 1979; Deming, 1986; Juran, 1989; Marchese, 1991; 1993; Schmidt and Finnigan, 1992). For a detailed explanation of these principles, see Freed et. al, 1996. The quality principles follow:

- **vision, mission, and outcomes driven:** What is your aim?
- **systems dependent:** How do the parts fit together?
- **leadership:** Who leads the creation of a new culture?
- **decisions based on fact:** How do you update your knowledge?
- **delegation of decision-making:** How do you make decisions?
- **collaboration:** Who makes the decisions?
- **systematic individual development:** How do you improve?
- **planning for change:** How do you prepare for the future?
- **leadership:** How are the changes supported?

A close examination of the quality principles reveals that they reflect the disciplines of a learning organization. Our goal was to develop a cross-institutional understanding of experiences of higher education institutions that are practicing the quality principles. We wanted to emphasize institutions' experiences, their noticeable successes and disappointing setbacks. We wanted to understand how these institutions learned, how they encouraged, supported, and accelerated learning. Ultimately, we wanted to understand how these institutions are building learning organizations.

Methods

Data Collection

We collected data in two stages to answer our research questions. In the first stage we gathered information from institutions that were identified as being involved in quality improvement activities by means of a questionnaire. An institution was selected to receive a questionnaire if it belonged to at least one of the following groups: the AAHE's Academic Quality Consortium, institutions identified in an ERIC publication as practicing TQM, or institutions listed in the annual "Quality in Education" survey printed by *Quality Progress*. Data were collected over the period February through July, 1994, and the results from this questionnaire were presented at the 1994 Annual ASHE Conference (Freed, Klugman, and Fife, 1994).

In the second stage, we concentrated on gathering data from ten institutions that had been implementing continuous quality improvement principles for at least three years. We visited these institutions during the period July, 1994, through February, 1995 and conducted in-depth interviews with individuals on their campuses during our visits.

We chose the following ten institutions for our site visits: Belmont University, Richland College, Rio Salado Community College, St. John Fisher College, Samford University, University of Chicago Graduate School of Business, University of Michigan - Ann Arbor, University of Minnesota - Duluth, University of Wisconsin - Madison, and Winona State University. These institutions are not a random sample of institutions that have adopted the quality concepts. They were carefully selected so that they covered a wide variety of institutions that have had successful quality efforts. These institutions are a mix of four-year public, four-year private, and two-year community colleges. Some are research-focused while others are primarily focused on teaching. They are a combination of sizes and are located across the United States.

We interviewed more than 20 individuals across the campus at nine of the ten institutions. Before visiting a particular institution, we contacted the person in charge of the quality initiative on the campus and asked that individual to set up a two-day interview schedule. We requested interviews with the following people at each institution: the president, the coordinator of the quality efforts on campus, the chief academic officer, and the deans and some faculty of the business and engineering schools (if these schools existed at the particular institutions). In addition, we conducted three focus groups: one of faculty, a second of administrators, and a third consisting of staff. We asked that the focus groups be made up of a mixture of quality champions, team leaders or facilitators, known critics of the quality efforts, people involved with the implementation who were not the leaders, and any other people who would contribute to our research effort. We requested to speak with people who opposed quality improvement as well as with people who favored the quality efforts in order to obtain a more balanced picture of the success of each institution's program. Interview questions were sent to the campus contact person so that interviewees could become familiar with the questions and prepare answers before

our visits. Persons who were willing to participate in these sessions were assured of the confidentiality of their responses.

The questions for the site visits were a combination of questions that originally had been asked on the mailed questionnaire, questions that followed-up on answers given on the mailed questionnaire, and questions asking for examples of quality improvement successes and failures. The questions were pre-tested on individuals associated with the AAHE CQI Project and were modified based on their feedback. Not all individuals at our case institutions were asked all of the questions we had prepared because of time constraints and because of the relevance of the questions given a person's position in the institution. For validity purposes, we asked most of the questions of at least two people within each institution.

The questions asked on the interviews were grouped into several sections. The first section asked for basic information on where, when, and why implementation began on campus and who led the implementation. The next section included questions about the philosophy of quality improvement at the institution including questions on how the senior leadership learned about continuous improvement and whose philosophy was being followed. A section on the mission of the institution followed with questions about how well-known the mission was within the institution and what changes had been made since the implementation of continuous improvement. Leadership and management style was covered in questions about the leader's commitment, empowerment, incentives, and how the institution's culture had changed. Development of individuals within the institution, teams, and tools were covered in another section, including questions on who was educated and how the education was accomplished, how projects and teams were chosen, which tools were used, what organizations were part of benchmarking activities, and how was the language of quality improvement handled. Another section addressed successes, obstacles, and results with questions on how success was measured and how the implementation could have been handled differently. Additional questions dealt with future continuous improvement plans for the institution.

Included in the interview questions were questions on academic successes and failures of the quality efforts. As faculty members, we were curious about the involvement of faculty in the process; especially, we were interested in when faculty were incorporated in the efforts, if they had been educated in the quality concepts, and if they supported the efforts. In addition, we wanted to learn the extent to which the quality concepts were being used to improve teaching and learning, what areas were integrating the ideas in the classroom, examples of successful teaching improvement, and what support was being given to the faculty by the administration.

The questions for the various focus groups were designed so that we could get an overall picture of the quality efforts at each institution. In the focus group sessions, the questions were much more general than the questions asked of individuals, providing freedom for these groups to spend larger amounts of time on issues that were of particular interest at their institution. Questions were asked along the following lines: what worked and what did not work in implementation, where the greatest impacts were felt, from where most of the resistance came,

what the hopes were and what the reality of the continuous improvement efforts had been, and reasons why the institution was implementing the quality concepts.

During the summer of 1995, we conducted follow-up interviews with the quality coordinator of each institution to determine what further developments had taken place since the site visit. Questions on the changes that had occurred since the site visits concentrated on leadership; education, teams, and tools; culture; successes, obstacles, and results; and from where any new resistance had come.

Data Analysis

All interviews conducted as part of the site visits were tape recorded and transcribed. In addition to the tapes, the interviewers took detailed notes during the interview sessions. The tapes were transcribed by a third party who has knowledge of the concepts of continuous quality improvement. The analysis of the information collected on our site visits was conducted using the constant comparative method for discovering theory from data (Glaser and Strauss, 1967). This method consists of first unitizing the data, followed by categorizing the units, and then determining the patterns present in the categories (Lincoln and Guba, 1985).

In unitizing the data, one of the investigators identified the smallest pieces of information that could be understood in the context of the study. The transcriptions were divided into units and mounted onto 5" by 8" cards. Each card was coded by institution and by the general grouping of the interviewee (president, administration, faculty, and staff). Approximately 2,500 cards comprise the data units for this study.

The cards were categorized through a process that allowed patterns in the data to emerge. The process used is similar to a very large affinity diagram with two individuals working to categorize the information. This process began with the selection of one card that was a result of the unitizing process. The information on the card was studied and that card was placed in the first pile of a category to be named later. The second card was then studied and a decision was made as to whether its contents were similar to the first card's contents; if similar, the second card was placed in the same category with the first card; if different, the second card was placed in a new category. Every successive card was treated similarly; if a card fit into no existing category, it was placed in a miscellaneous category. A large number of categories had emerged after several hundred cards had been studied; therefore, at that time, each group of cards was labeled with a short phrase that captured the overall topic that appeared on the cards. After all cards had been studied, cards in the miscellaneous category were studied again to determine whether any of those cards fit into the categories that had emerged. Most of the miscellaneous cards were placed into existing categories, a few remained that could not be classified.

The first pass on this categorization process was done by the investigator who had not participated in the unitization of the information. The cards were then passed to the other investigator who checked the categorization, reclassified cards that were perceived to have been misclassified, made up new categories, and then divided the major categories into subcategories.

Each investigator made one more pass through the cards to check if there were any obvious discrepancies in the classifications and to determine if there were any patterns that had been missed.

Results

At the end of the categorization process, we had identified approximately 25 major categories, many of which had several subcategories. At this point, we viewed the categories as being relatively independent of one another. To bring order to these results, we searched for interrelationships among the categories. We created a model of the quality practices in higher education institutions that is illustrated in Figure 1. Five themes had emerged from our data and became primary components of our model: drivers, development and implementation of systems, enhancers and restraints, outcomes, and lessons learned.

Insert Figure 1 about here

The first theme revolves around the forces driving the quality improvement on campus. Within this theme, several patterns emerged and were categorized as internal or external drivers of an institution's quality improvement efforts. Major external drivers include: shrinking resources, enrollment fluctuations, and increasingly competitive marketplace, business and industry demands, suggestions from institutional boards, parents' and students' expectations, and the assessment movement in higher education. As one administrator pointed out:

> *The carrot that got us into the quality movement was the budget, but in the end we can't see that any budget accommodations were made as a result of quality initiatives. Our quality efforts have given us some ideas about how to solve problems without extra money. It has encouraged us not to wait around for people to give us more money.*

Major internal drivers include: dedicated leaders at all levels of the institution, faculty who wanted to improve their teaching and their students' learning, members of the institution who had a personal willingness to improve, and detractors. Two quotations that illustrate internal drivers are as follows:

> *I saw quality as a way to bring about cultural change. The idea struck a lot of values that are spiritual or humanitarian that I hold dear. It allowed us to concentrate on the distinctiveness of our institution, and to differentiate our product in the marketplace.*

> *For me, the concept of quality is the change that takes place in the individual, not the change that takes place in the organization. I do not think the organization can change unless individuals change. Individuals change because you change incentives and*

attitudes, and attitudes change slowly.

A second theme that surfaced focuses on the systems that institutions develop and implement to support their quality efforts and to ensure that continuous learning takes place. Nine systems were identified: learning about quality improvement, developing vision and mission statements that are outcome driven and communicating these statements across the institution, developing individuals within the institution, collecting and analyzing data for making decisions, improving communication within the institution, developing and encouraging teamwork and collaboration, improving teaching and learning, creating a quality culture, and financially supporting the quality efforts.

A third theme that emerged concerns the factors that enhance or restrain the quality improvement efforts on campus. We grouped the factors under the following seven major categories: leadership, development of individuals, decision-making based on data, communication, teams and teamwork, teaching and learning, and culture change. For example, the two quotations below illustrate how leaders can either enhance the quality efforts or restrain them:

The greatest impact of quality has been related to leadership and to the development of an understanding about quality within the department.

The administration will listen, but not really hear. We can tell them our concerns, but they will do what they want to anyway.

Since we were particularly interested in the results of their quality efforts, questions were asked to determine if quality initiatives were working. Therefore, outcomes was the fourth theme that emerged. Outcomes are measures of the progress of the continuous improvement process and include: positive change in leadership, improved coordination among members, data-driven decision-making, improved communication, improved processes and problem-solving skills, greater stakeholder satisfaction, increased member involvement in making decisions, and positive culture change.

In a learning organization, people think differently about learning, relate differently to each other, and understand their connectedness to the organization. A learning organization requires thinking about learning and learning new ways to think. We discovered that institutions had learned significant lessons, both positive and negative, along their quality journey. As learning organizations, they were able to use this knowledge to improve their problem-solving skills throughout their institutions. In an attempt to help other institutions learn from the experiences of our case institutions, we present twelve major lessons that emerged from our data. Consistent with the definition of benchmarking, the lessons learned can be used by other institutions to shorten the journey and expedite the learning curve so as to avoid obstacles,

enhance experiences, and remove restraints. The twelve lessons that emerged from our interviews are found below. Selected quotations highlight our findings:

> *Systems thinking is difficult for faculty because they often have little connection with the larger picture. They are more like independent entrepreneurs who are accustomed to working alone.*
>
> *Because senior leaders come and go, unless you get quality improvement into your culture, it is going to blow away.*
>
> *We might have engaged faculty by educating them differently, by giving them information to read because they're great readers. Then we could have asked them to write their impressions and ask that they present that to their peers. Faculty need to teach and educate faculty about quality improvement. Faculty are key power brokers, but they are often not on board.*

Lesson 1: Systems thinking is imperative. Institutions further along on the quality journey demonstrate a more in-depth understanding of systems thinking. Interviewees articulated a concern for how the numerous parts of an institution are interrelated and why this is an essential component for successfully practicing quality concepts.

Lesson 2: Institutional culture must change. We found that if the culture of an institution did not change, the institution is not truly dedicated to quality improvement. Members of institutions look to their leaders to accomplish the culture change. When leaders practice what they espouse, others follow their examples and slowly begin changing their behaviors as well. As a result, the culture of the entire institution becomes a culture of continuous improvement.

Lesson 3: Quality culture leadership is critical. Repeatedly we heard that the senior leadership must be involved for the quality improvement process to be taken seriously. The most successful initiatives among our case institutions have senior leaders who prepared their organizations for change. These individuals believe in continuous improvement and are willing to become examples for their institutions.

Lesson 4: An effective communication system is necessary. Communication must be carried on at all levels, no one can be perceived to be left out. As well, communication must go both ways, from the top down and from the bottom up. Our case institutions discovered that one of the best ways to keep the lines of communication open is for the leaders to ask for honest feedback and then to act on that feedback.

Lesson 5: Developing members is essential. All employees need to receive information about the implementation of continuous improvement. Without an understanding of the quality principles and practices, members are not willing to support the quality efforts.

Additional education is necessary as implementation progresses, and just-in-time education is the approved method for accomplishing this at most of our case institutions. Using this approach, members are able to apply what they learned immediately in their jobs.

Lesson 6: Build partnerships with stakeholders. Partnering with a business, another institution, or the community gives members of the institution the opportunity to see how quality improvement is implemented in another area. Interaction with outside organizations raises the visibility of the quality movement on campus and improves the efforts because of the exchange of ideas that takes place.

Lesson 7: Implementation is time-consuming. At the outset, education and development require a time commitment for all and serving on teams means added work for institutional members. However, as people become more familiar with quality improvement concepts, they realize that less time is consumed when jobs are performed using quality improvement ideas. When decisions are based on data rather than arrived at arbitrarily, the amount of time spent on projects is reduced because less re-work is necessary.

Lesson 8: Keep the quality movement visible. To get the implementation off to a good start, it is necessary to look for opportunities to convince others of the value of quality improvement. It is wise to choose projects that are easy and inexpensive early in the implementation process. In addition, it is necessary to talk about the successes, to give examples whenever and wherever possible. Institutions that have quality programs with high visibility tend to have members with a good understanding of continuous improvement.

Lesson 9: Detractors are valuable. It is important to get skeptics and detractors involved in the process rather than to argue with them about the rationality of continuous improvement. Some detractors become zealous converts once they see the applicability of the quality ideas and witness some successes. Others are not converted to the ideas, but ask probing questions about quality improvement. This questioning forces advocates to develop a better understanding of continuous improvement.

Lesson 10: Don't leave anyone out. Faculty members are frequently left out of the educational efforts at the beginning of implementation and it becomes difficult to involve them later. In contrast, institutions that educate faculty from the start report that faculty become interested in the process, find the new ideas stimulating, and help promote the efforts.

Lesson 11: Watch your language. One of the biggest challenges institutions face is the quality improvement language. Words often get in the way of progress. Faculty members are upset about words that they consider better suited to business, such as customer, total quality, and management. Institutions further along their quality journeys had more success when they turned to emphasizing continuous improvement concepts rather than words, some did not even use the word "quality".

Lesson 12: Just get started! Because of the allocation of time, money, and persons, leaders within institutions may decide that now is not the best time to begin implementation. However, the problem is that the best time may never come. The consensus of people we

interviewed is to begin implementation as soon as a core group within the institution is engaged in the movement. It is important for people to understand that the process is one of trial and error, that mistakes will be made, and that they need to understand that the mistakes are part of the learning process.

Discussion

Do the practices of institutions implementing the ideas of quality improvement reflect quality principles? We conclude that the practices of our case institutions do reflect the quality principles enumerated. Some institutions are further along their quality journeys and have developed systems that deal with many of the principles, while others are struggling with some of the principles and recognize that they need more time to implement systems that support continuous improvement. Regardless, members of our case institutions realize that they are working toward improving their institutions and that quality improvement is a continuous process.

Vision, mission and outcomes driven. With the exception of one institution, all of our case institutions have a mission statement, the institution that is the exception is in the process of creating one. The statements were usually written by combining the efforts of many members so that they did take into consideration the expectations of internal stakeholders. Some of the institutions include input from their boards, which adds information on the expectations of external stakeholders.

Systems dependent. Members of our case institutions indicated that they have a fairly good understanding of processes, systems, and the interdependence of the two. They understand that problems within their institutions are usually the fault of the system rather than of individuals. Interviewees reported that they developed a much higher opinion of their co-workers than they had before the continuous improvement efforts.

Leadership to create a quality culture. In most of our case institutions, the president is the main driver of the quality movement. With the help of other top-level administrators, the president is able to lead the quality movement on campus. Leaders work to develop a shared vision so that all goals are in alignment with the mission of the institutions. As well, most leaders recognize that they are role models for their constituents; that their behaviors communicate their commitment to quality improvement.

Decisions based on fact. All of our case institutions realize the importance of the gathering and use of data for making decisions. Even though collecting and analyzing data take additional time, interviewees believe that the resulting decisions are different and greatly improved over decisions that would have been made without data.

Delegation of decision-making. Our case institutions understand the power of involving employees in making decisions and in improving processes and systems. Employees are excited about the freedom and responsibility given to them. We were told that employee morale has increased because they feel valued and that their voices are being heard.

Collaboration. Most of the time it is common to have people collaborating to solve problems rather than individuals strictly working independently. Cross-functional teams are regularly used to make improvements and to solve problems. Although teams are used more on the administrative side than on the academic side, they are organized for a wide variety of situations.

Systematic individual development. Most of our case institutions have systems in place that allow members to learn new skills, help them improve themselves, and make it possible for them to learn from their mistakes. As an indication of the importance of this principle, members are usually given time off to attend development sessions that are conducted on institutional time. We were told that morale increased because members understand that they are valued by the organization. They feel like the institution is investing in them by developing their skills.

Planning for change. We conclude that people with whom we spoke have a noticeably different attitude about change. They are more willing to make changes and to accept changes that are made. For the most part, they perceive change as a positive aspect to be encouraged and they feel empowered to take risks in order to make improvements. Most of our interviewees are proactive in seeking ways to make changes by involving representatives of internal and external stakeholders. When their needs are taken into consideration, there is a higher probability that their needs can be satisfied.

Leadership to support quality initiatives. Of all the principles, this is the most difficult to implement. Most of the reward systems have not been changed enough to reinforce changes in behaviors and attitudes. Many of the institutions have minimal, if any, budgets to support quality efforts, but interviewees stressed that they found creative ways to financially support their quality movement. Partnering with business and industry in the community in which institutions are located is one way several institutions are able to fund their efforts.

Conclusion

After visiting ten institutions that had been implementing quality principles and practices for at least three years, we conclude that their cultures embrace change, they have developed systems that support quality initiatives, and they are consciously aware of feedback so that they can learn from their efforts in order to continually improve systems and processes. We developed a model to reflect the overall system of a learning organization striving to continuously improve. The model identifies the forces that drive the quality movement on campus, the systems that are created to sustain the quality efforts, the factors that enhance and restrain the movement, the outcomes of quality practices, and the lessons learned from engaging in the quality journey.

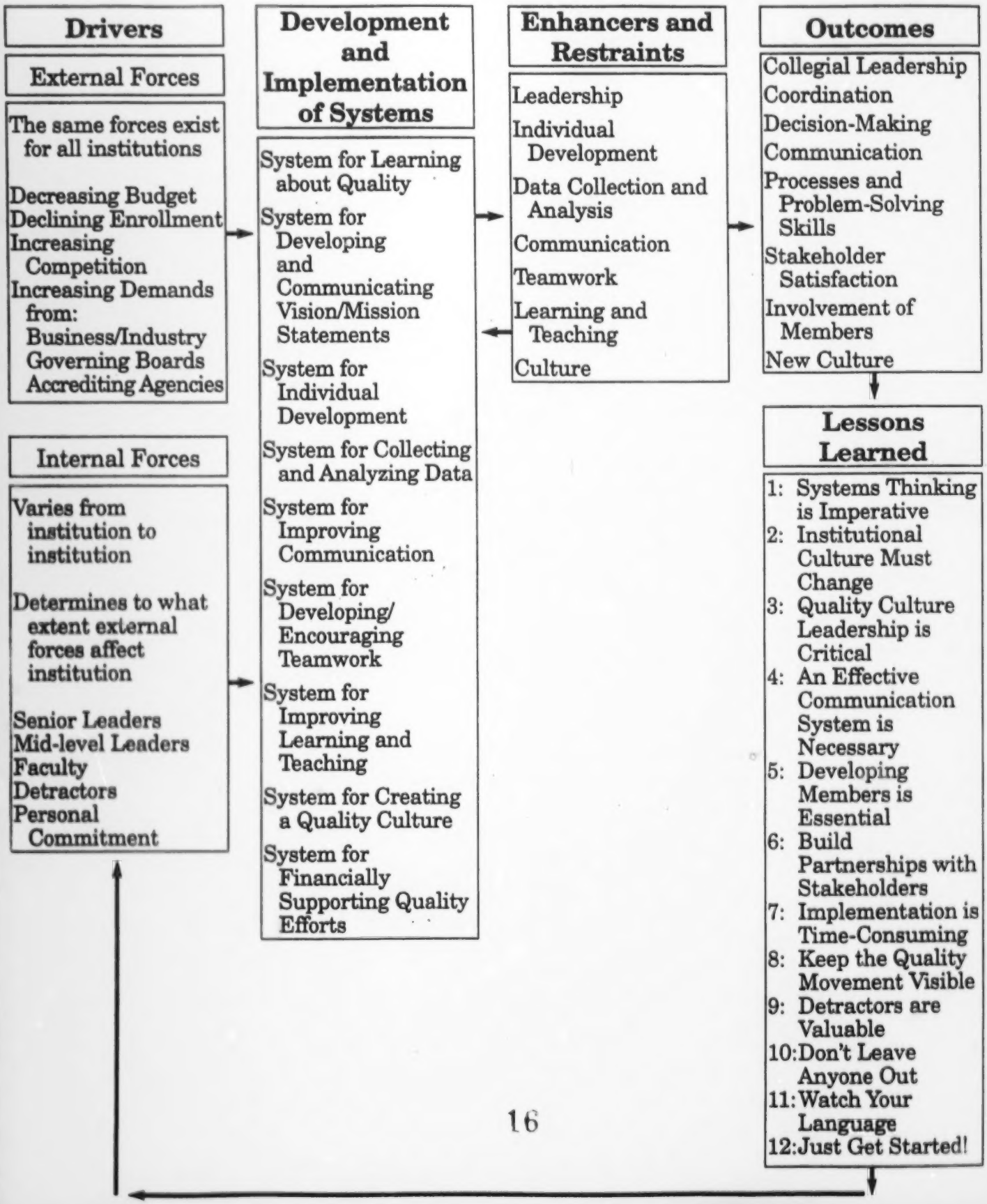
We realize that the detractors and restraints make institutions think about how to improve. The outcomes are measures of the progress of the quality principles and practices. Together with the lessons learned, feedback from the outcomes is evaluated and becomes input that continues to drive the movement. This occurs because institutions are intentional about

learning and improving.

The ten institutions openly cooperated and shared information with us in the hopes that our research will contribute to the learning of other institutions. It is apparent to us that members are rethinking the way they work, how they relate to one another, and how they interact with stakeholders. Even though the institutions are at various stages of their quality journeys, we conclude that most of them are organizations striving to practice quality principles so that quality is improved for all constituencies.

Having visited these campuses, we conclude that their institutional culture *feels* different from the cultures of institutions with which we are more familiar that are not engaged in quality improvement efforts. The majority of people with whom we spoke indicated that they welcomed continuous change because they recognized that it contributed to learning. The hallmark of higher education institutions should be learning. We found that the more committed an organization is to learning, the more committed it is to continuous improvement.

Figure 1. Quality Practices in Higher Education Institutions



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